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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/678,377  | 09/30/2003  | Joseph Hungate       | 030501              | 4033             |
| 7590  | 04/15/2005  |                      | EXAMINER            |                  |
| John E. Grosselin, III<br>Buchanan Ingersoll, P.C.<br>One Oxford Centre<br>301 Grant Street, 20th Floor<br>Pittsburgh, PA 15219 |             |                      | TRAN, DALENA        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3661                |                  |
| DATE MAILED: 04/15/2005   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/678,377             | HUNGATE ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Dalena Tran            | 3661                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 24 January 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-22 is/are pending in the application..  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-17,21 and 22 is/are rejected.
- 7) Claim(s) 1-18 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

**Notice to Applicant(s)**

1. This office action is responsive to the amendment filed on 1/24/05. Claims 1-22 are pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5,10, and 12-17, are rejected under 35 U.S.C.103(a) as being unpatentable over Ralph (6,823,242) in view of Horst (6,466,847).

As per claim 1, Ralph discloses an automated voice transmission method to authorize the movement of trains in non-signaled territory, automated voice transmission method comprising: generating a non-verbal movement authority for a designated train in non-signaled territory; and converting non-verbal movement authority to a verbal movement authority (see at least column 5, lines 58-67); and communicating verbal movement authority to designated train (see at least columns 11-12, lines 50-8). Ralph does not disclose receiving verbal movement authority on-board designated train, and communicating acceptance or rejection of verbal movement authority. However, Horst discloses receiving verbal movement authority on-board designated train (see at least columns 1-2, lines 56-37), and communicating acceptance or rejection of verbal movement authority from on-board designated train (see at least columns 3-4, lines 59-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the teach of Ralph by combining receiving verbal movement authority on-board designated train, and communicating acceptance or rejection of verbal movement authority from on-board designated train to make sure the driver of the train receive accurate signal of movement of the train to ensure safety and avoiding any confusion in authorize the movement of trains.

Also, as per claim 2, Horst discloses communicating to designated train confirmation of acceptance or rejection (see at least column 4, lines 8-51).

Also, as per claims 3-4, Horst disclose communicating to designated train confirmation of acceptance or rejection, and requiring a secure code to authorize receiving verbal movement authority (see at least column 5, lines 3-56).

As per claim 5, Ralph does not disclose secure code to authorizing receiving verbal movement authority. However, Horst discloses requiring a first secure code to authorizing receiving verbal movement authority (see at least columns 4-5, lines 60-3), and requiring a secure code to authorize acceptance or rejection of verbal movement authority (see at least column 5, lines 3-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ralph by combining requiring a secure code to authorize acceptance or rejection of verbal movement authority to ensure positive train control based on signal status and operation profile of the route.

Also, as per claim 10, Horst discloses communicating non-verbal movement authority to designated train in text format for comparison with verbal movement authority (see at least column 3, lines 1-58).

Claims 12-13, are system claims corresponding to method claims 1-2 above. Therefore, they are rejected for the same rationales set forth as above.

Claim 14, is a system claims corresponding to method claim 3 above. Therefore, it is rejected for the same rationales set forth as above.

As per claims 15-16, Ralph does not disclose compares secure code. However, Horst discloses a movement authority crew acknowledgment verifier which compares first secure code to second secure code and authorizes communication of verbal movement authority to designated train if first and second secure codes correspond, and to verify acceptance or rejection of verbal movement authority communicated from designated train in response to reception of verbal movement authority (see at least column 5, lines 3-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ralph by combining compares secure code to authorize acceptance or rejection of verbal movement authority to ensure positive train control based on signal status and operation profile of the route.

Also, as per claim 17, Horst discloses a second secure code generator on board designated train, second secure code generator corresponding to first secure code in order to authorize communication of verbal movement authority (see at least column 5, lines 3-55).

4. Claim 6, is rejected under 35 U.S.C.103(a) as being unpatentable over Ralph (6,823,242), and Horst (6,466,847) as applied to claim 1 above, and further in view of Hayashi et al. (4,307,859).

As per claim 6, Ralph and Horst do not disclose identifying a location of designated train. However, Hayashi et al. disclose identifying a location of designated train, and selecting a communication device nearest location of designated train (see at least the abstract; and columns

2-3, lines 57-44), and communicating verbal movement authority to designated train via communication device (see at least column 4, lines 8-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ralph and Horst by combining identifying a location of designated train for accurately communicate the movement authority to designated train.

5. Claims 7-9,11, and 21-22, are rejected under 35 U.S.C.103(a) as being unpatentable over Ralph (6,823,242), Horst (6,466,847), and Hayashi et al. (4,307,859) as applied to claims 6,10, and 12 above, and further in view of Polivka et al. (5,828,979).

As per claim 7, Ralph, Horst, and Hayashi et al. do not disclose communicating position information from designated train to dispatch office. However, Polivka et al. disclose communicating position information from designated train to dispatch office at which movement authority is generated (see at least columns 4-5, lines 39-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ralph, Horst, and Hayashi et al. by combining communicating position information from designated train to dispatch office for monitoring and tracking movement of a train.

As per claim 8, Ralph, Horst, and Hayashi et al. do not disclose receive GPS position. However, Polivka et al. disclose receiving GPS position information on-board designated train, and communicating GPS position information from designated train to dispatch office (see at least columns 6-7, lines 51-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ralph, Horst, and Hayashi et al. by combining receiving GPS position information on-board designated train, and communicating

GPS position information from designated train to dispatch office for accurately monitoring train position, in order to send a correct message to a designated train for authorizing train moment.

As per claim 9, Polivka et al. disclose communicating locomotive identification information from designated train to dispatch office (see at least columns 8-9, lines 65-52).

Also, as per claim 11, Polivka et al. disclose generating non-verbal movement authority using a computer aided system that assures only non-conflicting movement authorities are generated (see at least columns 10-11, lines 30-47).

Claims 21-22, are system claims corresponding to method claims 10-11 above.

Therefore, they are rejected for the same rationales set forth as above.

6. Claim 18-20, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Remarks**

7. Applicant's argument filed on 1/24/05 has been fully considered. Upon updated search, the new ground of rejection has been set forth as above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The examiner can normally be reached on M-F (7:30 AM-5:30 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 703-305-8233. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Patent Examiner  
Dalena Tran



April 13, 2005